



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 250 HS Solvent-Free Coating
CHEMICAL FAMILY NAME: Mixture
U.N. NUMBER: UN1993
U.N. DANGEROUS GOODS CLASS: Flammable Liquid, n.o.s. See Section 14 for details
SUPPLIER/MANUFACTURER'S NAME: Energy Shield Systems
ADDRESS: 2801 East Camelback Rd #200 Phoenix, AZ 85016
EMERGENCY PHONE: Within USA and Canada: 1-800-424-9300 CCN793193

BUSINESS PHONE: 877-552-6724 (Product Information)
WEB SITE: www.energyshieldsystems.com
DATE OF CURRENT REVISION: February 19, 2015
DATE OF LAST REVISION: April 4, 2013

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Product Description: This product is a viscous liquid in various colors including white, tan, light gray and dark gray with a slight odor.

Health Hazards: Exposure to the product may cause skin and eye irritation. Prolonged exposure may cause skin sensitization. Ingestion is not a normal route of exposure under normal product use. If swallowed, product may cause gastrointestinal irritation. This product contains an ingredient that is suspected of causing cancer and/or reproductive harm.

Flammability Hazards: This product is a combustible liquid as defined by OSHA with a flash point of 128°F

Reactivity Hazards: None known.

Environmental Hazards: The environmental effects of this product have not been investigated; however it is expected to cause adverse effects in the environment.

Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire-suppression equipment) suitable for the situation to which they are responding.

US DOT SYMBOLS

CANADA (WHMIS) SYMBOLS

EUROPEAN and (GHS) Hazard Symbols

See Section 14 for Details



Signal Word: **Warning!**

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE IN ACCORDANCE WITH 29 CFR 1200 (OSHA HCS) AND THE EUROPEAN UNION DIRECTIVES:

This product does meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 AND the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Proprietary Polymer is non-hazardous and is not listed in ESIS

CAS# 37244-96-5 This substance is not listed in ESIS

EC# 236-675-5 This substance is not classified in the Annex I of Directive 67/548/EEC

EC# 209-136-7 Annex I Index# 014-018-00-1

EC# 245-366-4 This substance is not classified in the Annex I of Directive 67/548/EEC

CAS# 112945-52-5 This substance is not listed in ESIS

EC# 251-882-0 This substance is not classified in the Annex I of Directive 67/548/EEC

Component(s) Contributing to Classification(s)

Nepheline Syenite, Titanium Dioxide, Octamethylcyclotetrasiloxane, 2-Butanone, O,O', O''-(Methylsilyldiyl)trioxime, Silica, Amorphous, fumed, crystal-free, 2-Butanone, O,O',O''-silanetetrayltetraoxime



GHS Hazard Classification(s):

Reproductive Toxicity Category 2
Acute Dermal Toxicity Category 4
Chronic Aquatic Toxicity Category 4

Hazard Statement(s):

H315: Causes skin irritation
H361: Suspected of damaging fertility or the unborn child H413: May cause long lasting harmful effects to aquatic life

Precautionary Statement(s):

HEALTH HAZARDS OR RISKS FROM EXPOSURE: P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection

ACUTE: This material may cause irritation to skin and eyes. Inhalation hazards are not expected because of low vapor pressure. Ingestion of this product may cause gastrointestinal irritation. This product contains an ingredient(s) that are suspected of causing reproductive harm.

CHRONIC: Prolonged or repeated skin contact may cause skin reactions.

TARGET ORGANS: ACUTE: Eye, Skin

CHRONIC: Skin

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Proprietary Polymer	Trade Secret	Not Listed in ESIS	Not Listed	45 – 60%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Nepheline Syenite	37244-96-5	Not Listed in ESIS	Not Listed	15 – 30%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Titanium Dioxide	13463-67-7	236-675-5	0338	5 – 15%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Octamethylcyclotetrasiloxane	556-67-2	209-136-7	0310	5 – 15%	HAZARD CLASSIFICATION: Repr. Cat. 3, [Xn] Harmful RISK PHRASES: R62, R53
2-Butanone, O,O', O"- (Methylsilylidyne)Trioxime	22984-54-9	245-366-4	Not Listed	2 – 7%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Silica, Amorphous, fumed, crystal-free	112945-52-5	Not Listed in ESIS	Not Listed	1 – 3%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
2-Butanone, O, O', O"- silanetetrayltetraoxime	34206-40-1	251-882-0	Not Listed	<1%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

SECTION 4 - FIRST-AID MEASURES

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation develops.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.



EDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin, or eye problems may be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

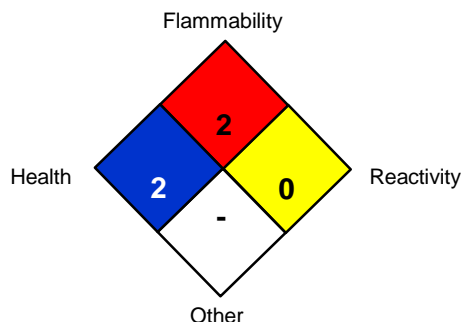
FLASH POINT: 128°F
AUTOIGNITION TEMPERATURE: Not Established
FLAMMABLE LIMITS (in air by volume, %): Lower Not Established Upper Not Established
(LEL): (UEL):

FIRE EXTINGUISHING MATERIALS: Carbon dioxide, foam, dry chemical, halon, water spray, sand, limestone powder.
UNUSUAL FIRE AND EXPLOSION HAZARDS: This material has been tested to ASTM D-4206 Standard and found not to sustain combustion Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)			2
FLAMMABILITY HAZARD (RED)			2
PHYSICAL HAZARD (YELLOW)			0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with a non-combustible absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.



STORAGE AND HANDLING PRACTICES: Keep container tightly closed and in a dry and cool place.

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA	WEEL
Proprietary Polymer	Non-Hazardous	Not Listed	Not Listed	Not Listed
Nepheline Syenite	37244-96-5	Not Listed	Not Listed	Not Listed
Titanium Dioxide	13463-67-7	10 mg/m ³	10 mg/m ³	10 mg/m ³
Octamethylcyclotetrasiloxane	556-67-2	Not Listed	Not Listed	Not Listed
2-Butanone, O,O', O"- (Methylsilylydyne)Trioxime	22984-54-9	Not Listed	Not Listed	Not Listed
Silica, Amorphous, fumed, crystal-free	112945-52-5	Not Listed	Not Listed	Not Listed
2-Butanone, O,O', O"- silanetetrayltetraoxime	34206-40-1	Not Listed	Not Listed	Not Listed

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:
APPEARANCE & ODOR:

Liquid
Viscous liquid in various colors including white, tan, light gray and dark gray with a slight odor.

ODOR THRESHOLD (PPM):
VAPOR PRESSURE (mmHg):

Not Available
Not Available

VAPOR DENSITY:
EVAPORATION RATE (nBuAc = 1):

Not Available
Not Available

BOILING POINT (C°):
FREEZING POINT (C°):

Not Available
Not Available

pH:
SPECIFIC GRAVITY 20°C: (WATER =1)
SOLUBILITY IN WATER (%)

Not Available
Not Available
Not Available

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: When heated to decomposition this product produces noxious gases such as CO, CO₂, and others.



MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: None known

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Heat and sources of ignition.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data is available for this product:

CAS# 13463-67-7 LD50 Acute Oral	>10000 mg/kg	Rat
CAS# 112945-52-5 LD50 Acute Oral	3160 mg/kg	Rat
CAS# 556-67-2 LD50 Inhalation	>12.7 mg/kg/4Hr	Rat
CAS# 556-67-2 LD50 Acute Oral	1540 mg/kg	Rat
CAS# 556-67-2 LD50 Acute Dermal	>2400 mg/kg	Rat

SUSPECTED CANCER AGENT: One or more of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore are considered to be, or suspected to be a cancer-causing agent by these agencies.

Titanium dioxide (13463-67-7)

ACGIH: A4 – Not classifiable as a Human Carcinogen

NIOSH: Potential occupational carcinogen

IARC: Monograph 93 posted, Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin and eyes.

SENSITIZATION OF PRODUCT: This product is considered a skin sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Octamethylcyclotetrasiloxane CAS# 556-67-2 is listed by the European Chemical Commission as a reproductive hazard causing harmful effects to fertility or the unborn child.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: None known

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE: None known

ASPIRATION HAZARD: None

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No specific data is available for this product, however this product is not expected to be readily biodegradable

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No specific data is currently available on this product's effects on plants or animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No specific data is currently available on this product's effects on aquatic life, however release of this product may have long term effects on the aquatic environment.

Specific Component Data:

Octamethylcyclotetrasiloxane (556-67-2)

Test & Species Conditions

96 Hr LC50 Brachydanio rerio >500 mg/L

96 Hr LC50 Lepomis macrochirus >1000 mg/L

24 Hr EC50 Daphnia magna 25.2 mg/L

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None listed

EU WASTE CODE: Not Listed



SECTION 14 - TRANSPORTATION INFORMATION

US DOT: IATA: IMO: ADR:

THIS PRODUCT IS CLASSIFIED AS DANGEROUS GOODS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

This product has been tested to the ASTM D-4206 Standard and determined that it does not sustain combustion. As result it is exempt from regulations when shipped ground or rail within the U.S.A.

PROPER SHIPPING NAME: Non-Regulated when shipped ground or rail with U.S.A.

HAZARD CLASS NUMBER and DESCRIPTION: None

UN IDENTIFICATION NUMBER: None

PACKING GROUP: None

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): None

MARINE POLLUTANT: This products ingredients that are not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

PROPER SHIPPING NAME: Flammable Liquid, n.o.s.

HAZARD CLASS NUMBER and DESCRIPTION: Class 3 Flammable

UN IDENTIFICATION NUMBER: UN1993

PACKING GROUP: PGIII

DOT LABEL(S) REQUIRED: Flammable class 3

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

Harmonized Tariff Code Not Listed

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: Yes Fire: Yes Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): None of the Ingredients are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of This product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as a Class B Division 3 Combustible liquid, and Class D Division 2B Materials causing other toxic effects, as per the Controlled Product Regulations.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.



AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed or exempt from listing on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or exempt from listing
Australian Inventory of Chemical Substances (AICS):	Listed or exempt from listing
Korean Existing Chemicals List (ECL):	Listed or exempt from listing
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or exempt from listing
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or exempt from listing
Swiss Giftlist List of Toxic Substances:	Listed or exempt from listing
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

GHS MSDS Compliance PLUS www.ghsmsdscomplianceplus.com

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